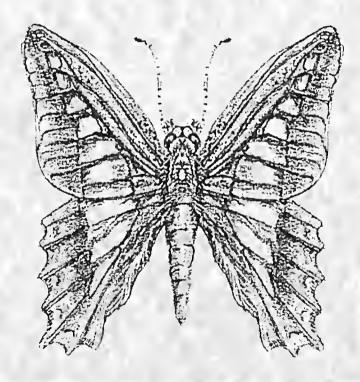
# VICTORIAN ENTOMOLOGIST

VOL. 31 No. 1

FEBRUARY 2001

Print Post Approved PP 349018/00058

Price: \$ 3.00



News Bulletin of The Entomological Society of Victoria Inc.

#### THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)

#### MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

#### **OBJECTIVES**

The aims of the Society are:

(a)to stimulate the scientific study and discussion of all aspects of entomology,

(b)to gather, disseminate and record knowledge of all identifiable Australian insect species,

(c) to compile a comprehensive list of all Victorian insect species,

(d)to bring together in a congenial but scientific atmosphere all persons interested in entomology.

#### MEETINGS

The Society's meetings are held at La Trobe University, 2<sup>nd</sup> Floor, Room 2.29, 215 Franklin Street, Melbourne (Opposite the Queen Victoria Market) Melway reference Map 2F B1 at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

#### SUBSCRIPTIONS

Ordinary Member \$20.00 (overseas members \$22)

Country Member \$16.00 (Over 100 km from GPO Melbourne)

Student Member \$12.00

Associate Member \$5.00 (No News Bulletin)

Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

Cover design by Alan Hyman.

Cover illustration of the Blue Triangle butterfly, Graphium sarpedon L. by Rhonda Millen.

## MINUTES OF THE GENERAL MEETING, 18 DECEMBER, 2000

Meeting opened 8.15 pm.

Present: I. Endersby, D. Dobrosak, , R. MacPherson, A. Kellehear, J Tinetti, P. Carwardine, R.

McMahon

Apologies: D. Stewart, G. Weeks, C Peterson

#### Correspondence:

Science Talent Search Competition results. Society sponsored entrants Lara Freidin and Adele
Knights received a Minor Bursary of \$20 for their video production on bees, and Meghan
Ketterer won a Major bursary of \$35 for her insects game.

#### Editor's Report:

- · Papers are welcome for April edition
- Latest issue was the first to be printed electronically

#### Treasurer's Report:

- Account balances are: General account \$5176: Le Soeuf account \$3448
- Membership: Metropolitan 38 Country 52

Life 3

Student 3

Associate 4

Institution 11

 Transfer of funds to new account will coincide with rollover of existing account Signatories will need to change to include members of council

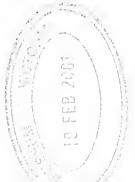
#### General Business:

- · Their was a general discussion about availability of meeting rooms
- Organisation for the February meeting was discussed
- It was suggested that the newsletter could include brief items of interest contributed by members.
   This will be further investigated.

#### Speaker:

This meeting featured members' contributions. D. Dobrosak presented slides of insects associated with wattles. R. Macpherson showed slides he had taken during his recent travels. R McMahon set up a display of specimens from his personal collection. Thankyou to all contributors.

Mccting closed 10, 20 pm



# OBSERVATIONS OF BUTTERFLIES AT THE CARNARVON RANGE, QUEENSLAND.

## P.S.VALENTINE1 and S.J.JOHNSON2

<sup>1</sup>Tropical Environment Studies and Geography, James Cook University, Townsville, Qld. 4811

#### Abstract

On 29th September, 1998 a total of 30 species of butterflies from five families were recorded from the roadside verge southeast of the Carnarvon National Park between Rolleston and Injune. These included new inland records for several species. The diversity and abundance recorded in a short period is a little surprising for this inland locality.

#### Introduction

Monteith and Yeates (1988) provide an important review of the butterflies in the Carnarvon Range area, although their observations refer specifically to the Mt Moffatt area of the Carnarvon National Park. They point out the significant species richness of this area and make comparisons with other Queensland and NSW localities.

During a brief field trip in southern Queensland, on 29th September, 1998 we passed through the Carnarvon Range some 95 km south of Rolleston, 75 km north of Injune. At this location (25°14.6S 148°37.6E), sandstone bluffs adjacent to the highway are fringed with a vine thicket community, open woodlands and forests. We were attracted to investigate the site because of the massed numbers of butterflies evident along the road, many feeding at abundant flowers. It appeared that recent rains had produced a significant emergence of adults and these were very active along the roadside. Given the brevity of our observations (from 1.00 pm to 3.00 pm), the remarkable richness recorded gives support to the high biodiversity values this location contains.

Amongst the obvious butterflies the Pieridae family was well represented with several species being abundant. Perhaps more surprisingly was the large number of Papilionidae including numerous *Protographium leosthenes* and *Graphium eurypylus* the latter not being previously recorded this far inland (around 350 km from the coast). Five species not recorded by Monteith & Yeates were noted during the brief field observations (approximately 2 hours were spent at the site) although three of these had previously been recorded at Blackdown Tableland (Atkins, 1996).

<sup>&</sup>lt;sup>2</sup>Oonoonba Veterinary Laboratory, PO Box 1085, Townsville, Qld. 4810

The following Table records the species positively identified at this location.

Hesperiidae	Nymphalidae
Toxidia peron	Danaus plexippus
Hesperilla malindeva	Danaus chrysippus
Hesperilla ornata	Tirumala hamata*
Papilionidae	Euploea core
Protographium leosthenes	Melanitis leda bankia
Graphium eurypylus*	Hypocysta metirius*
Papilio aegeus	Hypocysta adiante
Cressida cressida	Ypthima arctous
Pieridae	Vanessa kershawi
Catopsilia pomona	Junonia villida
Eurema hecabe	Acraea andromacha
Eurema smilax	Lycaenidae
Elodina parthia	Candalides consimilis*
Elodina padusa	Nacaduba biocellata
Belenois java teutonia	Lampides boeticus
Cepora perimale	Leptotes plinius*
	Zizina labradus

Table I List of species from Carnaryon Range, Queensland 29th September, 1998. (Those species with an asterix are additions to Monteith & Yeates 1988 list).

#### References

- ATKINS, A. 1996 Expedition Range Revisited: A list of butterflies mainly from Blackdown Tableland, Central Queensland, Queensland Naturalist 34(4-6):41-47.
- COMMON, I.F.B. and WATERHOUSE, D.F. 1981 Butterflies of Australia, Angus and Robertson, Sydney, 682 pp. 2<sup>nd</sup> Edition
- DUNN, K.L. and DUNN, L.E. 1991 Review of Australian butterflies: distribution, life history and taxonomy, Parts 1-4, privately published by the authors, Melb.
- MONTEITH, G.B. & YEATES, D.K. 1988 The Butterflies of Mount Moffatt and Carnaryon National Parks, Queensland, *Queensland Naturalist* 28(5-6):14-22.

# The ENTOMOLOGICAL SOCIETY OF VICTORIA Inc.



# How to Make an Insect Collection

Collect insects only for a special purpose or for an educational display. Limit the number of each species that you take.

# Handling will spoil the specimen.

Try to touch it only with a fine brush or a long pin instead of your fingers.

Use forceps if you have them.

Do not be in a hurry: the more careful you are the better your collection will be! There are over 85,000 known kinds of insects in Australia. All require some special treatment, and one of the pleasures of collecting is that you will have to think out for yourself the best method of collecting and displaying them.

#### CATCHING INSECTS

Even the most active insects can simply be trapped in small boxes or glass tubes. Stalk them, but don't frighten them with your shadow.

A NET will catch the swiftest insects out of doors. It consists of a ring fitted to a light wooden handle and any light netting material through which the specimen can be seen plainly. Do not make it of any material which will stiffen or kink. The net should be twice as long as it is wide, and should taper to the bottom. The diameter may vary from 45 cm for a butterfly or dragonfly net to small ones of 15 to 20 cm.

Catch the insect with a downward or sideways sweep to bring it to the bottom of the net. A flick of the wrist will allow the cnd to fall over the rim, enclosing the insect in the bag. Within this a small box or glass tube may be very gently placed over the specimen.

A stronger net is useful for SWEEPING back and forth over foliage to gather hidden specimens.

Try also BEATING for specimens. Whack a branch suddenly with a stick and surprising numbers of beetles and other insects will tumble on to a white cloth stretched beneath. There is work to be done after dark, when moths and other nocturnal insects may be added to the collection. Hang a LIGHT from a branch to shine on a white sheet. This should be stretched at an angle above the lantern because moths will fly upward from the light. Stretch another cloth beneath to catch beetles and other specimens which fall after flying at the lantern.

#### KILLING INSECTS

Use a wide-mouthed bottle so that the insects will not be damaged.

Be sure that it has a tight fitting cork or lid. Never fill a killing bottle with a squirming mass of insects of different kinds, and do not put a large beetle in with smaller specimens, or you will find them bitten to fragments.

Always keep onc bottle for moths and butterflies only, other-wise they will shed their scales over the other insects.

Use a few drops of cthyl acetate on crumpled tissues; do not use cotton wool as it becomes entangled in the insect's legs.

#### TO MOUNT INSECTS

Mounting is carried out while the insect is still flexible. Once it is dry and hard its position is fixed. The specimen should be mounted preferably 8 to 24 hours after killing.

Mount your insects in life-like attitudes if you can, but it: is also important that the legs and wings should be arranged so that they may be examined easily.

Tip the insects out of the jar on to some soft material - blotting paper or a handkerchief; not cotton wool, which gets tangled in the legs. You will have to learn the delicate art of pushing the pin through the specimen without injuring its wings or legs. A small block of wood with a hole in the centre is a help in pushing the pin through to the same distance in each specimen.

The pins which you use must be special entomological pins which do not rust They are inserted while the insect is still soft and afterwards used for handling the hardened specimens.

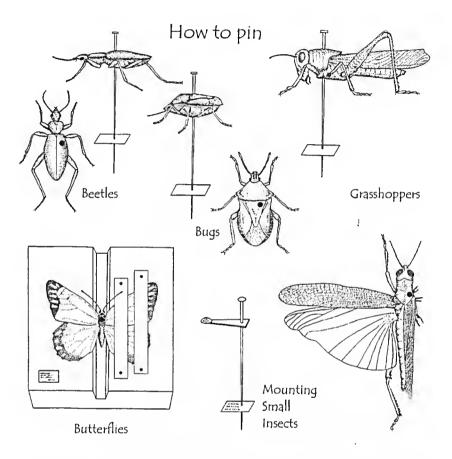
Now pin the insect on to a sheet of wallboard, polystyrene or cork to dry. First very carefully arrange the legs, using a large pin or brush, and hold them in position until dry between ordinary pins.

Mayflics, dragonflies, cockroaches, mantids, stick insects, locusts, grasshoppers and crickets, wasps ants and bees, and moths and butterflies, should be mounted with a pin through the middle of the thorax, or, in some cases, a little to the right of centre to avoid ridges and other structures on the centre line. In these groups the wings may or may not be spread (see instructions below if you wish to spread them).

Bugs and cicadas should be pinned through the thorax (scutellum) a little to the right of centre. Except in the cicadas, the wings are generally not spread.

Beetles may be pinned through the right wing cover about one fifth of its length from the wing base.

Flies should be pinned through the middle of the thorax between the bases of the wings. The wings are stiff, so that they are difficult to spread satisfactorily, the best method, if you wish to spread them, is to hold them forward until they are dry with two pins.



You may wish to mount the larger butterflies and moths with their wings spread. This requires a "setting board", consisting of two parallel strips of soft material (polystyrene or balsa wood) glued close together so that a groove is left to accommodate the insect's body. The wings are held forward until dry by strips of paper pinned into the foam, but not through the wing. The most difficult operation is drawing the wings forward into position: with some practice it is possible to hold one wing, and at the same time to draw the other forward with a pin inserted behind one of the large "veins" on the front edge of the wing.

Small Specimens, --- Small bugs, beetles and ants may be mounted on small triangular "points" attached to pins. These are cut from heavy glazed paper or thin cardboard, and are about 6 mm long and 3mm wide at the base. The specimen is attached to the "point" by the side of the abdomen with gum, or glue; all specimens should be mounted on the same side to give a uniform appearance.

#### THE COLLECTION

There are many ways of housing a collection, from elaborate cabinets with cork-lined drawers to simple trays covered with pieces of glass. The principal requirement in all is the soft material of the bottom of the tray into which the specimens are pinned. Polystyrenc foam or even corrugated packing paper make good substitutes for cork. The tray is neatly lined with white paper, and if possible covered with a sheet of glass to keep out dust and prevent damage.

Labels should be very small (practise printing so that the letters are legible, yet as small as possible). They are placed on the pin below the specimen, and must contain the following information.

The locality

The date

The collector's name

The scientific name of the species may be added, but this is generally placed on a second label.

Separate labels for the order and family can be pinned to the floor of the case above all the specimens of the same kind.

"Museum pests" (small bectles and mites) will attack your collection unless you keep it well stocked with mothballs (this is no empty threat!) Place it in a matchbox so that it will not roll about and damage the specimens.

#### REFERENCE BOOKS

Murray Upton — "Methods for collecting, preserving and studying insects" Australian Entomological Society, 1991

Paul Zborowski & Ross Storey. — "A field guide to insects in Australia". Reed, Sydney, 1995

Entomological Society of Victoria http://www.vicnet.net.au/~vicento/

Prepared by Ian Endersby for the Entomological Society of Victoria Inc.

## Australian Journal of Entomology Volume 39, Part 4, 2000

The Australian Entomological Society publishes the Australian Journal of Entomology quarterly. The Entomological Society of Victoria is an affiliated society and will, in future, publish the contents of the Journal for the wider interest of its members.

#### SYSTEMATICS

DE Walter. First record of a fig mite from the Australian Region: Paratarsonemella giblindavisi sp. n. (Acari: Tarsonemidae).

RB Halliday. Additions and corrections to Mites of Australia: A checklist and bibliography.

T Pape, SC McKillup & RV McKillup. Two new species of Sarcophaga (Sarcorohdendorfia) Baranov (Diptera: Sarcophagidae), parasitoids of Littoraria filosa (Sowerbyi) (Gastropoda: Littorinidae).

PJ Hudson. A new flightless species of *Pogonus* Nicolai (Coleoptera: Carabidae) from Western Australia.

P. Kolesik. Gall midges (Diptera: Cecidomyiidae) of Australian cypress-pines *Callitris* spp. (Cupressaceae), with descriptions of three new genera and three new species.

KR Norris. Lectotype designation and description of the Tasmanian blowfly Calliphora dispar Macquart 1846 (Diptera: Calliphoridae)

PJ deBarro, F Driver, ID Naumann, S Schmidt, GM Clarke & J Curran. Descriptions of three species of *Eretmocerus* Haldeman (Hymenoptera: Aphelinidac) parasitising *Bemisia tabaci* (Gennadius) (Hemiptera: Aleyrodidae) and *Trialeurodes vaporariorum* (Westwood) (Hemiptera: Aleyrodidae) in Australia based on morphological and molecular data.

#### MORPHOLOGY

CM Palmer, OG Ovtshinnikova & DK Yeates. Male genitalia of Exeretonevra Macquart (Diptera: Xylophagidae): structure, function and phylogenetic implications.

#### **ECOLOGY**

MG Neilsen. Distribution of the ant (Hymenoptera: Formicidae) fauna in the canopy of the mangrove tree Sonneratia alba J. Smith in northern Australia.

#### BEHAVIOUR AND PHYSIOLOGY

P Grundy & D Maelzer. Predation by the assassin bug *Pristhesancus plagipennis* (Walker) (Hemiptera: Reduviidae) of *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) and *Nezara viridula* (L.) (Hemiptera: Pentatomidae) in the laboratory.

AR Clarke & MP Zalucki. Foraging and vein-cutting behaviour of Euploea core corinna (W.S. Macleay) (Lepidoptera: Nymphalidae) caterpillars feeding on latex-bearing leaves.

Z Steen & MP Schwarz. Nesting and life cycle of the Australian green carpenter bees Xylocopa (Lestis) aeratus Smith and Xylocopa (Lestis) bombylans (Fabricius) (Hymenoptera: Apidae: Xylocopinae).

#### PEST MANAGEMENT

D-L Ma, G Gordh & MP Zalucki. Biological effects of azadirachtin on *Helicoverpa armigera* (Hübner) (Lepidoptera: Noctuidae) fed on cotton and artificial diets.

P Grundy & D Maelzer. Assessment of *Pristhesancus plagipennis* (Walker) (Hemiptera: Reduviidae) as an augmented biological control in cotton and soybean crops.

DG James, RJ Faulder, B Vogele & CJ Moore. Pheromone-trapping of *Carpophilus* spp. (Coleoptera: Nitidulidae) in stone fruit orchards near Gosford, New South Wales: fauna, seasonality and effect of insecticides.

PG Allsopp, NG McGill & JK Stringer. Host-plant resistance in sugarcane to pink ground pearls, *Eumargarodes laingi* Jakubski (Hemiptera: Margarodidae): confirmation and further screening of clones.

SJ Duffield & SL Jordan. Evaluation of insecticides for the control of *Helicoverpa armigera* (Hübner) and *Helicoverpa punctigera* (Wallengren) (Lepidoptera: Noctuidae) on soybean, and implications for field adoption.

#### BIOLOGICAL CONTROL

MJ Steinbauer, PB Edwards, M Hoskins, T Schatz & IW Forno. Seasonal abundance of insect biocontrol agents of *Mimosa pigra* in the Northern Territory.

JA Goolsby, J Makinson & M Purcell. Seasonal phenology of the gall-making fly Fergusonina sp. (Diptera: Fergusoninidae) and its implications for biological control of Melaleuca quinquenervia.

J Mo, M Treviño & WA Palmer. Establishment and distribution of the rubber vine moth, Euclasta whalleyi Popescu-Gorj & Constantinescu (Lepidoptera: Pyralidae), following its release in Australia.

#### MEDICAL ENTOMOLOGY

MJ Geary, DK Knihinicki, RB Halliday & RC Russell. Contact dermatitis associated with the brown-legged mite, *Aleuroglyphus ovatus* (Tropeau) (Acari: Acaridae), in Australia.

# THE ENTOMOLOGICAL SOCIETY OF VICTORIA (INC.) FINANCIAL MEMBERS AND THEIR INTERESTS

Dr Neil W. Archbold, P.O. Box 199, DONCASTER EAST VIC 3109. Lepidoptera, Blattodea, Fossil History of Insecta.

Mr Andrew Arnold, P.O. Box 213, BALLARAT VIC 3353.

Ms. Heather Arnold, P.O. Box 176 WARBURTON VIC 3799. Mecoptera.

Mr Andrew Atkins, 9 Bathurst Street, DUDLEY NSW 2290. Butterfly conservation & diversity, Phylogeny, taxonomy, biology and biogeography of Hesperiidae (Skippers).

Mr Brian Bainbridge, 46 Garnet Street BRUNSWICK VIC 3056. Restoration ecology, Wildlife art, Melbourne northern suburbs (Merri Creek).

Mr R Bashford, Forestry Commission, G P O Box 207B HOBART TAS 7001. Forest entomology, Predators and parasites.

Dr Peter Bedford, 50 Castle Street, EAGLEMONT VIC 3084. General, Lepidoptera.

Mr Gordon Berg, 6 Venice Street, BOX HILL SOUTH VIC 3128. Pasture entomology, Butterflies, IPM.

Dr Michael Braby, Museum of Comparative Zoology, Harvard University, 126 Oxford Street, CAMBRIDGE MA 02138-2902 USA. Lepidoptera (Hesoerioidea, Papilionidae), ecology, conservation, taxonomy, photography.

Mr Bert Candusio, Insectarium of Victoria, Calder Highway, WOODEND, VIC 3442. Public education, conservation, ecology & curation.

Mr Petcr Carwardine, 5/154 Grange Road CARNEGIE VIC 3163. General.

Mr C.E. Chadwick. 9/2 Francis Road, ARTARMON NSW 2064. Ecology, History

Mr Robert and Stephen Condron, 96 Shannon Street, BOX HILL NORTH VIC 3129. Lepidoptera, General.

Dr Laurie Cookson, 14A Parkside Court, WARRANDYTE VIC 3113, Forest products and insects, Beeltes, collecting.

Mr Mike Coupar, 143 Brackenbury Street, WARRANDYTE VIC 3113. Lepidopteran photography.

Mr John D'Apice, 1802/187 Liverpool Street, SYDNEY NSW 2000. Butterflies.

Mr Greg Daniels, Entomology Department, University of Queensland, BRISBANE QLD 4072. Diptera, Systematics.

Mr Daniel Dobrosak, 66 Wiltonvale Avenue, HOPPERS CROSSING VIC 3029. General Entomology, Coleoptera (Paropsinini).

Mr Fabian Douglas, 20 Rigg Street, RAINBOW VIC 3424. Lepidoptera; Coleoptera.

Mr Cameron Dickson, 53 Heywood Street, RINGWOOD VIC 3134

Dr. Ali-Nur Duale, 6 Melrose Street, BRAYBOOK VIC 3019.

Mr Kelvyn Dunn, 19 Yackatoon Road UPPER BEACONSFIELD VIC 3808. Butterflies, moths & cicadas, general insect biogeography, ecology & conservation.

Mr Rod Eastwood, 270 Bloomfiled Street, CLEVELAND QLD 4163. Australian Lepidoptera, Lycainid-ant symbioses.

Mr E.D. Edwards, CSIRO Div of Entomology, GP O Box 1700 CANBERRA ACT 2601. Taxonomy of Lepidoptera.

Mr W. D. Elder, 48 Albert Street, KERANG VIC 3579.

Mr Ian Endersby, 56 Looker Road, MONTMORENCY VIC 3094. Odonata, Insect behaviour, photography.

Mr Ian Faithfull, 2 Jacana Drive CARRUM DOWNS VIC 3201. Coleoptera (Scarabaeidae), Ichneumonidae, Lepidoptera, Agricultural Entomology, Biocontrol.

Dr Arthur and Enid Farnworth, 47 The Boulevarde, DONCASTER VIC 3108. General, photography.

Mrs Enid Farnworth, 47 The Boulevarde, DONCASTER VIC 3108. Associate member.

Mr Richard J. Faulder, PO Box 136, YANCO NSW 2703. Spiders especialy Mouse species, agricultural entomology, Phylogeny & Systematics.

Mr Brian Faulkner, P.O. Box 343, PICTON NSW 2571. Biological Control, Bees, Butterflies.

Dr Ross P. Field, 70 Spencer Road, OLINDA VIC 3788. Butterflies, Insect Conservation, Biological Control.

Mr Graham Forbes, 103 Wadley Street, MACGREGOR QLD 4109. Lepidoptera (Lycaenidae).

Ms Alena Glaister, 52 Sassafrass Creek Road, SHERBROOKE VIC 3789. Coleoptera (Elmidae), freshwater insects.

Mr Ed and Pat Grey, 8 Woona Court, YALLAMBIE VIC 3085. Arachnology, Field Surveys.

Mr Roger Grund, 9 Parkers Road, TORRENS PARK SA 5062. Butterflies.

Dr Penny Gullan, Department of Entomology, University of California, One Shields Avenue, DAVIS CA 95616-8584 USA. Coccoidea, general entomology, particularly systematics & biogeography.

Mr Keith Hately, R M B 382, NHILL VIC 3418. Buprestidea, Lepidoptera.

Mr Cleveland Herd, 14 Balaster Drive, PACKENHAM VIC 3810. Butterfly collecting & rearing.

Mr Lionel Hill, 63 Lawrence Drive, DEVONPORT TAS 7310. Australian Dipsocoromorphan Bugs, Tasmanian Noctuidae, Agricultural entomology.

Mr David Holmes, 33 Fig Street, DROMANA VIC 3936. World Lepidoptera, especially S.E. Asia & Australia.

Mr R Hornabrook, 27 Orchard Street Wadestown, WELLINGTON NEW ZEALAND. Coleoptera, particularly Cleridae, Butterflies.

Mr Lindsay Hunt, 2 Chelmsford Avenue MITCHAM SA 5062. Butterflies.

Mr Mark Hunting, c/o 8 Pullen Court SPRINGVALE VIC 3171. Butterflies.

Mr Alan H Hyman, 15 Garland, BUNDANOON NSW 2578. Collection of butterflies and diurnal moths, Nature/Landscape photography.

Dr. S. Johnson, P.O. Box 1085, TOWNSVILLE QLD 4810. Butterflies.

Mr Peter Karargiris, 13 Arizona Terrace, GLENALTA SA 5052. Coleoptera, History of Entomology..

Dr Allan Kellehear, 37 Villamanta Street, GEELONG WEST VIC 3218. Odonata, Lepidoptera.

Mr Peter Kelly, 16 Roberts Street, BRUNSWICK EAST VIC 3057. Chrysomelidae.

Prof J. Kerr, 29 Hipwood Road, HAMILTON QLD 4007. Lepidoptera.

Mr David King, Abervale Village 216/86 Church Street, GROVEDALE VIC 3216. Arachnids.

Mr Dennis Kitchin, 21 Alderley Street, TOOWOOMBA QLD 4350. Butterflies Coleoptera (Cetoniinae).

Mr T. A. Lambkin, Farming Systems Institiue, Entomology Building, DPI 80 Meiers Road, INDOOROOPILLY QLD 4068. Australian butterflies, Neotropical Lepidoptera, Cicadidae, IPM systems.

Mr David Lane, 3 Janda Street, ATHERTON QLD 4883. Indo-Australian Lepidoptera.

Mr A. Leavesley, 5 Krog Court, TOOWOOMBA QLD 4350. Lepidoptera.

Mr David Leviston, 3A Bass Street, EDEN, NSW 2551. Aquatic Entomology.

Mr Martin Linger, 6/12 Rosella Street, MURRUMBEENA VIC 3163. Lepidoptera (Microlepidoptera), Coleoptera, Homoptera, Odonata, Phasmida.

Mr David Lohman, MCZL 26 Oxford Street, CAMBRIDGE MA 02138 USA.

Mr Raymond MacPherson, 8 Jean Street, LOWER TEMPLESTOWE VIC 3107. Beetles, Insects in General.

Ms Elanor Mahon, 2 Thom Jean Street, ALEXANDRA VIC 3714. The influence of habitat disturbance on population dynamics of invertebrates, especially spiders, ants and beetles.

Dr M. Malipatil, Institute of Plant Sciences, Private Bag 15 SCORSBY BUSINESS CENTRE VIC 3176. Hemiptera, taxonomy & biology of economic insects in general.

Mr Raymond McMahon, P.O. Box 1453, TULLAMARINE VIC 3043. Butterflies, Beetles, Insects of quarantine concern/risk, Beneficial/predatory insects.

Mr David Meehan, 19 Kardella Lane, MT ELIZA VIC 3930. Lepidoptera, General entomology.

Mr Paul Meehan, 19 Kardella Lane, MT ELIZA VIC 3930. Lepidoptera, General entomology

Mr Cliff Meyer, 10 Anne Clarke Avenue, NICHOLLS ACT 2913. Lepidoptera.

Dr Geoff Monteith, Queensland Museum, P O Box 3300 SOUTH BRISBANE QLD 4101. Taxonomy & biogeography of Coleoptera and Hemiptera.

Mr M.D. Moore, 5 Oakleigh Road, MARION SA 5043.

Ms Larissa Morey, 14 Richardson Street, OAKLEIGH VIC 3166. Technical entomology, Curation, Odonata, Orthoptera, Arachnids.

Mr Tony Morton, Lot 21 Greville Street VAUGHAN VIC 3451. Lepidoptera (Hesperiidae & Lycaenidae).

Mr Max Moulds, 16 Park Avenue, WAITARA NSW 2077. Taxonomy & biology of Lepidoptera (Sphingidae), Cicadidae.

Dr T.R. New, Department of Zoology, La Trobe University, BUNDOORA VIC 3083. Neuroptera, Psocoptera, ecology, conservation, systematics.

Mr Greg Newland, 62 Ewing Street, MURWILLUMBAH NSW 2484. Butterflies

Mr Peter Ockenden 9 Belle Avenue WANGARATTA, 3677, Butterflies and beetles

Mr Timothy Ockenden 9 Belle Avenue WANGARATTA, 3677, collecting beetles

Mr Steven Ouwerkerk, P.O. Box 183 WANGARATTA VIC 3676.

Dr A.B. Owen, 27 Frater St, EAST KEW VIC 3102. Butterflies.

Mr Mike Pucetti, P.O. Box 426, ALYANGULA N.T. 0885. Butterflies.

Mr Deniss M. Reeves, 30 Bramston Terrace, HERSTON QLD 4006. Odonata, rearing, photography.

Mr Graeme Riddell, 31 Jordan Grove, GLEN WAVERLEY VIC 3150. Butterflies, Moths, Spiders, Ants, Bees & Wasps.

Dr Peter Samson, BSES,PMB 7, MACKAY MAIL CENTRE QLD 4741. Sugarcane entomology, life histories of butterflies (Lycaenidae).

Ms Jennifer Shield, 34 Kendall Street, SPRING GULLY VIC 3550. Spiders.

Mr Stephen Smith, 3 Avocet Court, WERRIBEE VIC 3030. Coleoptera, Cicadidae, Hepialidae.

Dr C.N. Smithers, Entomology Department Australian Museum, 6 College Street SYDNEY NSW 2000. Psocoptera, Mecoptera, Neuroptera, insect migration, general entomology.

Mr David Stewart, PO Box 2152, ROSEBUD PLAZA VIC 3939. General entomology.

Mr John Stoner, 157 Seventh Avenue, ROSEBUD VIC 3939. Pest insects, Biocontrol.

Mr Allen Sundholm. Lucanidae, Cerambycidae, Cetoniinae, Buprestidae, Butterflies, Saturnidae.

Ms Jan Tinetti & Chris Peterson, 138 Noone Street, CLIFTON HILL VIC 3068. Ecology, Butterflies.

Mr Jim Turner, 960 Kurmond Road, NORTH RICHMOND NSW 2754. Buprestidae.

Mr Ray Vagi, 12/399 Murray Road, PRESTON VIC 3072. Butterflies, beetles.

Mr Peter Valentine, TESAG, James Cook University, TOWNSVILLE QLD 4811. Butterfly biogeography, conservation & ecology, tropical ecology.

Mr C. van Dijk, P.O. Box 91, AUBURN SA 5451. Coleoptera, Hemiptera, Botany.

Mr Beresford Vardy, PO Box 1055, BENDIGO VIC 3552. Butterflies.

Mr John Wainer, 2 St Phillip Street, ABBOTSFORD VIC 3121. Ecology & Taxonomy of ants, beetles and butterflies.

Dr Ken Walker, Museum Victoria, GPO Box 666E, MELBOURNE VIC 3001. Systematics of Australian native bees.

Ms Bronwyn Walkley, 45 Sherwood Road, EAGLEMONT VIC 3079. Collecting butterflies and moths.

Mr Gary Webb, 32 Cook Street, CARINGBAH NSW 2229. Cerambycidae, forest entomology, effects of forest practices.

Mr Geoffrey Weeks, 394 Belmore Road, MONT ALBERT NORTH VIC 3129. Butterflies, particularly Australian.

Mr Matthew Williams, Department of Conservation & Land Management, Locked Bag 104 BENTLEY D.C. WA 6983. Conservation, butterflies, cicadas.

Dr Peter Williams, 72 Summerhill Road, GLEN IRIS VIC 3146. Stored products & pasture entomology, Coleoptera, Lepidoptera, Odonata (Petaluridae).

Mr Graham Wood, P.O. Box 122, ATHERTON QLD 4883. Australian Lepidoptera & coleoptera (Lucanidae, Buprestidae, Cetoniinae).

Mr Graham Wurtz, 1 Troon Court, THURGOONA NSW 2640. Butteflies.

Dr Alan Yen, Museum Victoria, GPO Box 666E, MELBOURNE VIC 3001. Insect ecology, conservation, psyllids.

Members, please notify any alterations or errors to the above list to the Society's Editor.

# AUTHOR INDEX TO VOLUME 30 (2000) OF THE VICTORIAN ENTOMOLOGIST

# Compiled by D. Dobrosak

Archbold, N.W.	The Fossil History of Insects - Evolution, Gaps in the Record and Extinctions with Comments on the Late Palaeozoic Insects of Gondwana	21
Chadwick, C.E V c	Sidelights on Sir William John Maeleay	77
Dunn, K.L.	A Probable Australian Cephrenes Species in Singapore with Biological Notes on C. Aealle (Hesperiidae)	24
Dunn, K.L.	Oviposition Behavior in Signeta flammeata (Butler) (Lepidoptera: Hesperiidae: Trapezitinae)	36
Dunn, K.L.	Carrying Pair Behavior and Mating Times in Some Indo-Australian Butterflies and Day-Flying Moths	63
Dunn, K.L. &		
Dobrosak, D.	List of Butterflies from Organ Pipes National Park, Vietoria	10
Endersby, I.D.	Nomenclatural Changes Affecting Victorian Dragonflies	40
Endersby, I.D.	Dragonfly conservation in Victoria	47
Endersby, I.D.	Book Review: Key to Keys: a guide to keys and zoological information to identify invertebrates from Australian inland waters.	52
Endersby, I.D.	Common names for Dragonflies	53
Faithfull, I	Migration of Belenois java teutonia (Lepidoptera: Pieridae) Near Armidale, New South Wales, November 1975	42
Faithfull, I.	New Southern Records of the Tiger Beetle Cicindela upsilon Dejean (Coleoptera:Cieindelinae)	74
Grund, R.	The Life Histories for <i>Thesclinesthes hesperia hesperia</i> Sibatini & Grund and <i>Thesclinesthes albocinta</i> Waterhouse (Form 4 adults Sibatani & Grund) (Lepidoptera: Lyeaenidae).	80
Kellchear, A.	The 2000 Presidential Address for the Entomological Society of Victoria. Them: Insects in Science Fiction.	85
Valentine, P.S. & Johnson, S.J.	Butterflies of Southwestern Queensland with New Life History Notes	59
Williams, A.A.E., Williams M.R. & Graham A.J.	Further Notes on some Western Australian Butterflies	3
1999 Winner of the	Zoo Le Souëf Memeorial Award – Mr Hugh Bollam	15

Recent Articles of Interest, Compiled by Ian Faithfull,	30
Recent Articles of Interest. Compiled by Ian Faithfull.	43
Recent Articles of Interest. Compiled by lan Faithfull.	55
Recent Articles of Interest. Compiled by Ian Faithfull.	72
Author Index to Volume 29 (1999) of the Victorian Entomologist	14

#### HELP WANTED

- Articles or papers for forthcoming issues of Victorian Entomologist. Please send your papers to the Hon. Editor.
- Unfinancial members!!! Please help the Society by forwarding your subscriptions
  as soon as possible. A 2001 Subscription form was sent to members with the
  December 2000 issue of Victorian Entomologist.

# CALL FOR NOMINATIONS: J.C. 'ZOO' LE SOUËF MEMORIAL AWARD

Nominations for the 2001 award are now invited. Details of Background, nomination, etc. were published in the December 1992 issue of the Victorian Entomologist and reproduced in the February 1996 Issue of the Victorian Entomologist. These details are also available on the Society's web site http://www.vicnet.net.au/~vicento Nominations must reach the Council at the following address by 30 September 2001:

Secretary, Entomological Society of Victoria Inc. 138 Noone Street, Clifton Hill, 3068

#### OFFICE BEARERS

PRESIDENT: Dr Allan Kellehear, 37 Villamanta Street, Geelong West 3218

HON SECRETARY: Jan Tinetti, 138 Noone Street, Clifton Hill, 3068. ph. 9486 2865 (AH)
HON TREASURER: Ian Endersby, 56 Looker Road, Montmorency 3094. ph. 9435 4781 (AH)

HON EDITOR: Daniel Dobrosak, 66 Wiltonvale Avenue, Hoppers Crossing 3029

ph 9764 7431 (BH) ph 9749 1476 (AH)

EXCURSIONS SEC: Peter Carwardine, 5/154 Grange Road, Carnegic 3163

pli. 9571 8958 (AH)

PUBLIC OFFICER: Ian Endersby, 56 Looker Road, Montmorency 3094. ph. 9435 4781 (AH)

IMMEDIATE PAST PRESIDENT: Peter Carwardine, 5/154 Grange Road, Carnegie 3163.

ph. 9571 8958 (AH)

COUNCILLORS: Ray MacPherson, David Stewart

#### CONTRIBUTIONS TO THE VICTORIAN ENTOMOLOGIST

The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. The Editor reserves the right to have articles refereed. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Items printed must not be reproduced without the consent of the author and Council of the Entomological Society of Victoria Inc.

Contributions may be typed on A4 paper or preferably sent to the Hon. editor on an IBM formatted disk in Microsoft Word for Windows, WordPerfect or any recognised word processor software with an enclosed hard copy. Contributions may also be E-mailed to Internet address: dubrosak@mira.net

The deadline for each issue is the third Friday of each odd month.

The Society's Home Page on the World Wide Web is located at:

http://www.vicnet.net.au/~vicento/

#### ADVERTISING

The charge for advertising is \$5.00 per half page.

The Victorian Entomologist is printed at MOORE Business Systems, Shell House Lower Lobby, 1 Spring Street, Melbourne, Victoria, 3000.

# CONTENTS

	Page
Minutes of General Meeting, 8 December 2000	1
Valentine, P.S. and Johnson, S.J. Observations of Butterflies at the Carnarvon Range, Queensland	2
How to make an Insect Collection	
Contents of the Australian Journal of Entomology Volume 39, Part 4, 2000	8
The Entomological Society of Victoria (Inc.). List of Financial Members and their interests	10
Author Index To Volume 30 (2000) of the Victorian Entomologist	
Call for Nominations: J.C. 'Zoo' Le Souëf Memorial Award	16

#### DIARY OF COMING EVENTS

Friday 16 February
General Meeting and Excursionto view the new location and facilities
of the Entomology section of the Museum at Carlton Gardens Melway Map 43 K5).

Meet 8 pm sharp at the main entrance to the museum (north of the Exhibition buildings).

Friday 16 March Council Meeting

Scientific names contained in this document are not intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the International Code of Zoological Nomenclature, Article 8(b). Contributions may be referred, and authors alone are responsible for the views expressed.